GenCore version 4.5

OM nucleic - nucleic search, using sw model

Run on: May 14, 2001, 18:27:00 ; Search time 127.21 Seconds
(without alignments)
78.015 Million cell updates/sec

Title: US-09-373-230-5
Perfect score: 17
Sequence: 1 TTYGARGARATGGAYCC 17

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 1.0

Searched: 678276 seqs, 291890651 residues

Total number of hits satisfying chosen parameters: 1356552

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : N_Geneseq_0401:*
1: /SIDS6/gcgdata/geneseq/geneseqn/NA1980.DAT:*
2: /SIDS6/gcgdata/geneseq/geneseqn/NA1981.DAT:*
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13: /SIDS6/gcgdata/geneseq/geneseqn/NA1992.DAT:*
14: /SIDS6/gcgdata/geneseq/geneseqn/NA1993.DAT:*
15: /SIDS6/gcgdata/geneseq/geneseqn/NA1994.DAT:*
16: /SIDS6/gcgdata/geneseq/geneseqn/NA1995.DAT:*
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19: /SIDS6/gcgdata/geneseq/geneseqn/NA1998.DAT:*
20: /SIDS6/gcgdata/geneseq/geneseqn/NA1999.DAT:*
21: /SIDS6/gcgdata/geneseq/geneseqn/NA2000.DAT:*
22: /SIDS6/gcgdata/geneseq/geneseqn/NA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	15.4	90.6	17	17	T32406	Interferon-gamma i
2	15.4	90.6	471	17	T32403	Mouse interferon-g
3	15.4	90.6	471	17	T16224	Interferon gamma p
4	15.4	90.6	471	18	T60536	Mouse interferon-g
5	15.4	90.6	471	18	T80210	Murine protein for
6	15.4	90.6	471	19	V48227	Mouse interleukin
7	15.4	90.6	471	19	V32632	Mutant mouse inter
8	15.4	90.6	471	19	V32633	Mutant mouse inter
9	15.4	90.6	471	21	Z36923	DNA encoding a pro
10	15.4	90.6	570	19	V32755	Wild-type mouse in
11	14.4	84.7	649	21	A16304	Human colon cancer
c 12	14.4	84.7	1550	19	T98608	DNA encoding two S
13	14.4	84.7	1551	19	Z96238	S. pneumoniae deri
14	14.4	84.7	8136	19	V52208	Streptococcus pneu
15	14.2	83.5	8377	20	X12945	Enterococcus faeca
c 16	13.8	81.2	570	21	C03999	Human secreted pro
17	13.8	81.2	722	19	V20875	Nucleotide sequenc
c 18	13.8	81.2	735	14	Q43400	p15045 NotI fragme
19	13.8	81.2	825	20	Z16677	Human gene express
c 20	13.8	81.2	893	19	V49594	Human Osterocarcin
c 21	13.8	81.2	1032	21	C54587	Arabidopsis thalia
22	13.8	81.2	1125	21	C34772	Arabidopsis thalia
23	13.8	81.2	1323	18	T87005	DNA encoding S. ce
24	13.8	81.2	1459	21	C33129	Arabidopsis thalia
25	13.8	81.2	1560	21	C79701	Human secreted pro
c 26	13.8	81.2	1632	22	C84220	S. pneumoniae yerS
27	13.8	81.2	2010	21	C59604	Human secreted pro
28	13.8	81.2	2016	21	C46128	Arabidopsis thalia
29	13.8	81.2	2017	21	C36177	Arabidopsis thalia
30	13.8	81.2	2059	21	C59970	Human secreted pro
31	13.8	81.2	2120	10	N92440	DNA sequence encod
c 32	13.8	81.2	3041	20	Z77524	Human ovarian tumo
c 33	13.8	81.2	3454	19	V52340	Streptococcus pneu
c 34	13.8	81.2	3712	21	F21873	Human breast and o
c 35	13.8	81.2	3751	18	T86087	Transgenic mouse N
c 36	13.8	81.2	3820	19	V32791	DNA sequence encod
c 37	13.8	81.2	3829	19	V60293	DNA sequence encod
38	13.8	81.2	9705	11	Q02828	Complete genomic s
39	13.8	81.2	65632	21	A81502	N. meningitidis pa
40	13.8	81.2	122186	22	C89560	Human histone deac
c 41	13.8	81.2	349980	21	F21544	Neisseria meningit
42	13.8	81.2	534720	19	V30458	Rhizobium species
43	13.8	81.2	536165	19	V30459	Rhizobium species
c 44	13.4	78.8	218	21	C55899	Eucalyptus grandis
c 45	13.4	78.8	363	21	A74215	Loblolly pine SSR

ALIGNMENTS

RESULT 1
T32406
ID T32406 standard; DNA; 17 BP.
XX
AC T32406;
XX
DT 29-SEP-1996 (first entry)
XX
DE Interferon-gamma inducer protein PCR primer.
XX
KW Interferon-gamma inducer protein; IFN-gamma; antiviral; virucide;
KW antitumour; antibacterial; immunoregulatory; adoptive immunotherapy;
KW therapy; cancer; polymerase chain reaction; PCR; primer; ss.
XX
OS Synthetic.
XX
PN EP712931-A2.
XX
PD 22-MAY-1996.
XX
PF 10-NOV-1995; 95EP-0308055.
XX
PR 29-SEP-1995; 95JP-0274988.
PR 15-NOV-1994; 94JP-0304203.
PR 23-FEB-1995; 95JP-0058240.
PR 10-MAR-1995; 95JP-0078357.
PR 18-SEP-1995; 95JP-0262062.
XX
PA (HAYB) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI Fukuda S, Kohno K, Kunikata T, Kurimoto M, Okamura H;
PI Taniguchi M, Tanimoto T, Torigoe K, Ushio S;
XX
DR WPI; 1996-252837/26.

```
XX
PT   DNA encoding interferon-gamma prodn.-inducing polypeptide - useful
PT   to treat and prevent, e.g. viral disease, malignancies and immune
PT   disorders
XX
PS   Example A-3-2; Page 14; 48pp; English.
XX
CC   PCR primers (T32405 and T32406) are based on portions of tryptic
CC   peptides (see also R99561-62) isolated from a novel interferon-gamma
CC   (IFN-gamma) inducer protein identified in mouse liver.  The
CC   primers were used to amplify cDNA from a mouse liver library,
CC   leading to the isolation of a clone (T32403) coding for mouse
CC   IFN-gamma inducer protein (R99559).
XX
SQ   Sequence 17 BP; 4 A; 2 C; 4 G; 3 T; 4 other;


  Query Match             90.6%;  Score 15.4;  DB 17;  Length 17;
  Best Local Similarity   100.0%;  Pred. No. 49;
  Matches   17;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 TTYGARGARATGGAYCC 17
          |||||||||||||||||
Db      1 ttygargaratggaycc 17


RESULT   2
T32403
ID   T32403 standard; cDNA to mRNA; 471 BP.
XX
AC   T32403;
XX
DT   29-SEP-1996  (first entry)
XX
DE   Mouse interferon-gamma inducer protein cDNA.
XX
KW   Interferon-gamma inducer protein; IFN-gamma; antiviral; virucide;
KW   antitumour; antibacterial; immunoregulatory; adoptive immunotherapy;
KW   therapy; cancer; ds.
XX
OS   Mus sp.
XX
PN   EP712931-A2.
XX
PD   22-MAY-1996.
XX
PF   10-NOV-1995;   95EP-0308055.
XX
PR   29-SEP-1995;   95JP-0274988.
PR   15-NOV-1994;   94JP-0304203.
PR   23-FEB-1995;   95JP-0058240.
PR   10-MAR-1995;   95JP-0078357.
PR   18-SEP-1995;   95JP-0262062.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Fukuda S,  Kohno K,  Kunikata T,  Kurimoto M,  Okamura H;
PI   Taniguchi M, Tanimoto T,  Torigoe K,  Ushio S;
XX
DR   WPI; 1996-252837/26.
DR   P-PSDB; R99559.
XX
PT   DNA encoding interferon-gamma prodn.-inducing polypeptide - useful
PT   to treat and prevent, e.g. viral disease, malignancies and immune
PT   disorders
XX
PS   Example A-3-2; Page 36-37; 48pp; English.
XX
CC   A cDNA clone (T32403) codes for a novel mouse protein (R99559) that
CC   induces interferon-gamma (IFN-gamma) prodn. by immunocompetent cells.
CC   The clone was obtd. from a mouse liver cDNA library by PCR
CC   amplification using primers (see also T32405-06) based on tryptic
CC   peptides (R99561-62) of the protein.  A DNA fragment based on
CC   the cDNA clone was used to screen a human liver cDNA library,
CC   leading to the isolation of a clone (T32402) coding for human mature
CC   IFN-gamma inducer protein (R99558), a useful therapeutic agent.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;


  Query Match             90.6%;  Score 15.4;  DB 17;  Length 471;
  Best Local Similarity   76.5%;  Pred. No. 67;
  Matches   13;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 TTYGARGARATGGAYCC 17
            ||:||:||:|||||:||
Db    244 tttgaggaaatggatcc 260


RESULT   3
T16224
ID   T16224 standard; cDNA to mRNA; 471 BP.
XX
AC   T16224;
XX
DT   02-SEP-1996  (first entry)
XX
DE   Interferon gamma production inducer protein coding sequence.
XX
KW   Interferon gamma; inducer; IFNgamma; immunocompetent cell; antiviral;
KW   antitumour; antiseptic; immunoregulatory; platelet-increasing agent;
KW   therapy; prevention; condyloma acuminatum; renal cancer; brain cancer;
KW   granuloma; mycosis fungoides; rheumatism; allergy; cytotoxicity; AIDS;
KW   killer T-cell; interleukin-2; IL-2; tumour necrosis factor; TNF;
KW   adoptive immunotherapy; monoclonal antibody; ds.
XX
OS   Mus musculus.
XX
PN   EP692536-A2.
XX
PD   17-JAN-1996.
XX
PF   13-JUL-1995;   95EP-0304906.
XX
PR   10-FEB-1995;   95JP-0045057.
PR   14-JUL-1994;   94JP-0184162.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Kohno K,  Kunikata T,  Kurimoto M,  Okamura H,  Taniguchi M;
PI   Tanimoto T, Torigoe K;
XX
DR   WPI; 1996-070177/08.
DR   P-PSDB; R92506.
XX
PT   Protein that induces gamma interferon prodn. in immuno:competent
PT   cells - used e.g. as antiviral or antitumour agent, also induces
PT   cytotoxicity of killer cells
XX
PS   Claim 4; Page 22-23; 30pp; English.
XX
CC   This sequence represents the coding sequence for the interferon gamma
CC   (IFNgamma) inducer protein of the invention.  The encoded protein induces
CC   IFNgamma production in immunocompetent cells.  The protein is useful as
CC   an antiviral, antitumour, antiseptic, immunoregulatory and
CC   platelet-increasing agent.  It can be used for treating or preventing
CC   AIDS, condyloma acuminatum, renal or brain cancer, granuloma, mycosis
CC   fungoides, rheumatism and allergy.  The protein can also be used to
CC   induce IFNgamma production in cultured cells.  The IFNgamma inducer
CC   strongly induces cytotoxicity of killer T-cells and when used with
CC   interleukin-2 (IL-2) and tumour necrosis factor (TNF), may improve the
CC   effect (or reduce side effects) of adoptive immunotherapy in tumours.
CC   This sequence can be used to produce the protein, which can then be
CC   purified (or assayed) using monoclonal antibodies.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;
```

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  Query Match             90.6%;  Score 15.4;  DB 17;  Length 471;
  Best Local Similarity   76.5%;  Pred. No. 67;
  Matches   13;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 TTYGARGARATGGAYCC 17
           ||:||:||:|||||:||
Db     244 tttgaggaaatggatcc 260


RESULT   4
T60536
ID   T60536 standard; cDNA to mRNA; 471 BP.
XX
AC   T60536;
XX
DT   26-JAN-1998  (first entry)
XX
DE   Mouse interferon-gamma inducer cDNA.
XX
KW   Interferon-gamma, IFN-gamma; antiviral; antioncotic; radiotherapy;
KW   immunoregulatory; antitumour agent; chemotherapy; leukopaenia;
KW   thrombocytopaenia; immunocompetent cell; asthma; hayfever;
KW   rheumatism; interleukin; killer cell; ds.
XX
OS   Mus musculus.
XX
FH   Key             Location/Qualifiers
FT   mat_peptide     1..471
FT                   /*tag=  a
FT                   /product= interferon gamma inducer
XX
PN   EP767178-A1.
XX
PD   09-APR-1997.
XX
PF   26-SEP-1996;    96EP-0306997.
XX
PR   20-SEP-1996;    96JP-0269105.
PR   26-SEP-1995;    95JP-0270725.
PR   29-FEB-1996;    96JP-0067434.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Akita K,  Fujii M,  Kurimoto M,  Nukada Y,  Tanimoto T;
XX
DR   WPI; 1997-205381/19.
DR   P-PSDB; W15704.
XX
PT   Human protein that induces interferon-gamma prodn. in
PT   immuno:competent cells - useful for adoptive immuno:therapy of
PT   tumours and as antimicrobial agent etc.
XX
PS   Disclosure; Page 22; 26pp; English.
XX
CC   The present sequence encodes a novel protein from mouse liver cells,
CC   which induces interferon-gamma (IFN gamma) production in immunocompetent
CC   cells. This protein enhances cytotoxicity of killer cells and induces
CC   their formation. It is used as an antioncotic agent for antitumour
CC   immunotherapy, an antiviral (including anti-AIDS) or antibacterial agent,
CC   and in the treatment of atopic or immune system diseases, e.g. asthma,
CC   hayfever or rheumatism. When formulated with interleukin-3, it is also
CC   used to treat leukopaenia and thrombocytopaenia associated with
CC   radiotherapy or chemotherapy of leukaemia and other cancers. When used
CC   in antitumour immunotherapy, this novel protein significantly improves
CC   the immunotherapeutic effect of interleukin-2 (IL-2), compared with use
CC   of IL-2 alone, either when administered to the patient (before
CC   administration of IL-2) or by addition to the medium in which cells
CC   (intended for return to the patient) are being grown.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;

  Query Match             90.6%;  Score 15.4;  DB 18;  Length 471;
  Best Local Similarity   76.5%;  Pred. No. 67;
  Matches   13;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 TTYGARGARATGGAYCC 17
           ||:||:||:|||||:||
Db     244 tttgaggaaatggatcc 260


RESULT   5
T80210
ID   T80210 standard; cDNA to mRNA; 471 BP.
XX
AC   T80210;
XX
DT   15-OCT-1997  (first entry)
XX
DE   Murine protein for induction of interferon-gamma.
XX
KW   Interferon-gamma; immunocompetent cell; malignant tumour;
KW   viral disease; bacterial infection; immune disease; ds.
XX
OS   Mus musculus.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..471
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FT                   /transl_except= pos:208..210, aa:Xaa
FT                   /note= "No stop codon given"
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PN   JP09157180-A.
XX
PD   17-JUN-1997.
XX
PF   24-JAN-1996;    96JP-0028722.
XX
PR   04-OCT-1995;    95JP-0279906.
PR   10-MAR-1995;    95JP-0078357.
PR   29-SEP-1995;    95JP-0274988.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
DR   WPI; 1997-369391/34.
DR   P-PSDB; W24262.
XX
PT   A drug containing a polypeptide which induces interferon-gamma -
PT   useful for treating e.g. malignant tumours, viral, bacterial or
PT   immune diseases
XX
PS   Disclosure; Page 10-11; 12pp; Japanese.
XX
CC   This sequence encodes a protein which induces interferon-gamma
CC   production in immunocompetent cells.  This protein may be used as
CC   the major component in a drug for the prevention and treatment of
CC   e.g. malignant tumours, viral diseases, bacterial infections and
CC   immune diseases.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;

  Query Match             90.6%;  Score 15.4;  DB 18;  Length 471;
  Best Local Similarity   76.5%;  Pred. No. 67;
  Matches   13;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 TTYGARGARATGGAYCC 17
           ||:||:||:|||||:||
Db     244 tttgaggaaatggatcc 260


RESULT   6
V48227
ID   V48227 standard; cDNA to mRNA; 471 BP.
```

```
XX
AC   V48227;
XX
DT   16-NOV-1998  (first entry)
XX
DE   Mouse interleukin 18 gene.
XX
KW   Mouse; interleukin-18; IL-18; osteoclast; hypercalcaemia; osteopenia; ds;
KW   osteoclastoma Behcet's syndrome; osteosarcoma; arthropathy; osteoporosis;
KW   chronic rheumatoid arthritis; deformity ostitis; primary hyperthyroidism.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..471
FT                   /*tag=  a
FT                   /product= "Interleukin 18"
FT                   /note= "No stop or start codon given"
XX
PN   EP861663-A2.
XX
PD   02-SEP-1998.
XX
PF   24-FEB-1998;   98EP-0301352.
XX
PR   25-FEB-1997;   97JP-0055468.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Gillespie MT,  Horwood NJ,  Kurimoto M,  Udagawa N;
XX
DR   WPI; 1998-448964/39.
DR   P-PSDB; W77078.
XX
PT   Use of interleukin-18 to inhibit osteoclast formation - in treatment
PT   of e.g. hypercalcaemia, osteoclastoma, Behcet's syndrome,
PT   osteosarcoma, chronic rheumatoid arthritis, deformity ostitis,
PT   primary hyperthyroidism and osteoporosis
XX
PS   Disclosure; Page 29; 56pp; English.
XX
CC   Interleukin-18 (IL-18) or a functional equivalent can be used for
CC   inhibition of osteoclast formation.  IL-18 is used for treating or
CC   preventing osteoclast-related diseases e.g. hypercalcaemia, osteoclastoma
CC   Behcet's syndrome, osteosarcoma, arthropathy, chronic rheumatoid
CC   arthritis, deformity ostitis, primary hyperthyroidism, osteopenia and
CC   osteoporosis.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 126 T; 0 other;


  Query Match             90.6%;  Score 15.4;  DB 19;  Length 471;
  Best Local Similarity   76.5%;  Pred. No. 67;
  Matches   13;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 TTYGARGARATGGAYCC 17
          ||:||:||:|||||:||
Db    244 tttgaggaaatggatcc 260


RESULT   7
V32632
ID   V32632 standard; cDNA; 471 BP.
XX
AC   V32632;
XX
DT   25-SEP-1998  (first entry)
XX
DE   Mutant mouse interferon-gamma inducing factor cDNA mIGIF/MUT11.
XX
KW   Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW   antitumour agent; antiviral agent; antimicrobial agent; tumour; mIGIF;
KW   hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW   osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX
OS   Mus sp.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..471
FT                   /*tag=  a
FT                   /product= "Mutant human interferon-gamma inducing
FT                         factor mIGIF/MUT11"
FT                   /note= "CDS does not contain a stop codon"
FT   mutation        19..21
FT                   /*tag=  b
FT                   /note= "changed from TGT in wild-type to GCT in
FT                         mutant"
XX
PN   EP845530-A2.
XX
PD   03-JUN-1998.
XX
PF   28-NOV-1997;   97EP-0309632.
XX
PR   14-NOV-1997;   97JP-0329715.
PR   29-NOV-1996;   96JP-0333037.
PR   21-JAN-1997;   97JP-0020906.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Kurimoto M,  Okamoto I,  Yamamoto K;
XX
DR   WPI; 1998-288747/26.
DR   P-PSDB; W48968.
XX
PT   Mutants of interferon-gamma inducing polypeptide - useful as
PT   antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS   Claim 10; pages 49-50; 59pp; English.
XX
CC   The present sequence represents the mutant mouse interferon-gamma
CC   inducing factor cDNA mIGIF/MUT11.  The wild-type mouse interferon-gamma
CC   factor (mIGIF) cDNA sequence is shown in V32755.  The invention provides
CC   for mutant human and mouse interferon-gamma inducing factors in which one
CC   or more cysteine residues are replaced with different residues at or away
CC   from the consensus sequences shown in W48956-W48958.  The mutant mIGIFs
CC   are capable of stimulating immunocompetent cells for the production of
CC   interferon-gamma and are claimed to be less toxic, more active and
CC   stable than the corresponding wild type mIGIF factor.  The mutant mIGIFs
CC   are also claimed to enhance killer cell cytotoxicity and/or induce killer
CC   cell formation, and may therefore be useful as antitumour agents,
CC   antitumour immunotherapeutics, antiviral agents and antimicrobial agents.
CC   The mutant mIGIFs are also claimed to be useful for treating hepatitis,
CC   acquired immunodeficiency syndrome (AIDS), malaria, tuberculosis, solid
CC   malignant tumours (e.g. renal carcinoma), rheumatism, osteoporosis and
CC   thrombopenia caused by radiation-  and chemo-therapy.
XX
SQ   Sequence 471 BP; 162 A; 92 C; 92 G; 125 T; 0 other;


  Query Match             90.6%;  Score 15.4;  DB 19;  Length 471;
  Best Local Similarity   76.5%;  Pred. No. 67;
  Matches   13;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 TTYGARGARATGGAYCC 17
          ||:||:||:|||||:||
Db    244 tttgaggaaatggatcc 260


RESULT   8
V32633
ID   V32633 standard; cDNA; 471 BP.
XX
AC   V32633;
XX
```

```
DT   25-SEP-1998  (first entry)
XX
DE   Mutant mouse interferon-gamma inducing factor cDNA mIGIF/MUT12.
XX
KW   Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW   antitumour agent; antiviral agent; antimicrobial agent; tumour; mIGIF;
KW   hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW   osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX
OS   Mus sp.
OS   Synthetic.
XX
FH   Key             Location/Qualifiers
FT   CDS             1..471
FT                   /*tag= a
FT                   /product= "Mutant human interferon-gamma inducing
FT                            factor mIGIF/MUT12"
FT                   /note= "CDS does not contain a stop codon"
FT   mutation        373..375
FT                   /*tag= b
FT                   /note= "changed from TGC in wild-type to AGC in
FT                          mutant"
XX
PN   EP845530-A2.
XX
PD   03-JUN-1998.
XX
PF   28-NOV-1997;   97EP-0309632.
XX
PR   14-NOV-1997;   97JP-0329715.
PR   29-NOV-1996;   96JP-0333037.
PR   21-JAN-1997;   97JP-0020906.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Kurimoto M,  Okamoto I,  Yamamoto K;
XX
DR   WPI; 1998-288747/26.
DR   P-PSDB; W48969.
XX
PT   Mutants of interferon-gamma inducing polypeptide - useful as
PT   antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS   Claim 10; page 50; 59pp; English.
XX
CC   The present sequence represents the mutant mouse interferon-gamma
CC   inducing factor cDNA mIGIF/MUT12.  The wild-type mouse interferon-gamma
CC   factor (mIGIF) cDNA sequence is shown in V32755.  The invention provides
CC   for mutant human and mouse interferon-gamma inducing factors in which one
CC   or more cysteine residues are replaced with different residues at or away
CC   from the consensus sequences shown in W48956-W48958.  The mutant mIGIFs
CC   are capable of stimulating immunocompetent cells for the production of
CC   interferon-gamma and are claimed to be less toxic, more active and
CC   stable than the corresponding wild type mIGIF factor.  The mutant mIGIFs
CC   are also claimed to enhance killer cell cytotoxicity and/or induce killer
CC   cell formation, and may therefore be useful as antitumour agents,
CC   antitumour immunotherapeutics, antiviral agents and antimicrobial agents.
CC   The mutant mIGIFs are also claimed to be useful for treating hepatitis,
CC   acquired immunodeficiency syndrome (AIDS), malaria, tuberculosis, solid
CC   malignant tumours (e.g. renal carcinoma), rheumatism, osteoporosis and
CC   thrombopenia caused by radiation-  and chemo-therapy.
XX
SQ   Sequence 471 BP; 163 A; 91 C; 92 G; 125 T; 0 other;


  Query Match             90.6%;  Score 15.4;  DB 19;  Length 471;
  Best Local Similarity   76.5%;  Pred. No. 67;
  Matches   13;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 TTYGARGARATGGAYCC 17
           ||:||:||:|||||:||
Db     244 tttgaggaaatggatcc 260
```

```
RESULT   9
Z36923
ID   Z36923 standard; cDNA to mRNA; 471 BP.
XX
AC   Z36923;
XX
DT   13-MAR-2000  (first entry)
XX
DE   DNA encoding a protein that induces IFN-gamma production.
XX
KW   Mouse; interferon gamma production; IFN-gamma; immunocompetent cell;
KW   antiviral; immunoregulatory; antigen; mitogen;
KW   IFN-gamma susceptible disease; antibacterial; antitumour;
KW   blood platelet enhancing agent; hepatitis; herpes syndrome; condyloma;
KW   AIDS; bacterial disease; Candidiasis; malaria; solid malignant tumour;
KW   renal cancer; mycosis fungoides; chronic granulomatous disease;
KW   blood cell malignant tumour; adult T cell leukaemia;
KW   chronic myelogenous leukaemia; malignant leukaemia; immune disease;
KW   allergy; rheumatism; ds.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   mat_peptide     1..471
FT                   /*tag= a
FT                   /transl_except= (pos: 208..210, aa: Xaa)
FT                   /note= "Xaa is not specified"
XX
PN   EP962531-A2.
XX
PD   08-DEC-1999.
XX
PF   10-NOV-1995;   99EP-0104104.
XX
PR   15-NOV-1994;   94JP-0304203.
PR   23-FEB-1995;   95JP-0058240.
PR   10-MAR-1995;   95JP-0078357.
PR   18-SEP-1995;   95JP-0262062.
PR   29-SEP-1995;   95JP-0274988.
PR   10-NOV-1995;   95EP-0308055.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Ushio S,  Torigoe K,  Tanimoto T,  Okamura H;
XX
DR   WPI; 2000-064289/06.
DR   P-PSDB; Y53905.
XX
PT   Novel polypeptides used in the treatment of interferon-gamma
PT   susceptible diseases -
XX
PS   Disclosure; Page 3; 42pp; English.
XX
CC   The present sequence encodes a murine protein that induces interferon
CC   (IFN)-gamma production by immunocompetent cells. IFN-gamma is a
CC   protein which has antiviral, antioncotic and immunoregulatory activities,
CC   and is produced by immunocompetent cells stimulated with antigens or
CC   mitogens. A probe derived from the present sequence was used to isolate
CC   the corresponding human protein from human liver cells. The protein of
CC   the invention is used to treat IFN-gamma susceptible diseases, and also
CC   have use as a antiviral agent, antibacterial agent, antitumour agent,
CC   immunoregulatory agent and blood platelet enhancing agent. Diseases
CC   which can be treated with the protein include viral diseases such as
CC   hepatitis, herpes syndrome, condyloma, and AIDS; bacterial diseases
CC   such as Candidiasis and malaria; solid malignant tumours such as renal
CC   cancer, mycosis fungoides, and chronic granulomatous disease; blood
CC   cell malignant tumours such as adult T cell leukaemia, chronic
CC   myelogenous leukaemia, and malignant leukaemia; and immune diseases
CC   such as allergy and rheumatism.
XX
SQ   Sequence 471 BP; 162 A; 91 C; 92 G; 125 T; 1 other;
```

```
  Query Match           90.6%;  Score 15.4;  DB 21;  Length 471;
  Best Local Similarity   76.5%;  Pred. No. 67;
  Matches   13;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 TTYGARGARATGGAYCC 17
          ||:||:||:|||||:||
Db    244 tttgaggaaaatggatcc 260


RESULT  10
V32755
ID   V32755 standard; cDNA; 570 BP.
XX
AC   V32755;
XX
DT   25-SEP-1998  (first entry)
XX
DE   Wild-type mouse interferon-gamma inducing factor cDNA.
XX
KW   Interferon-gamma inducing factor; interferon-gamma; killer cell;
KW   antitumour agent; antiviral agent; antimicrobial agent; tumour; mIGIF;
KW   hepatitis; malaria; tuberculosis; renal carcinoma; rheumatism; AIDS;
KW   osteoporosis; thrombopenia; acquired immunodeficiency syndrome; ds.
XX
OS   Mus sp.
XX
FH   Key             Location/Qualifiers
FT   5'UTR           1..15
FT                   /*tag=  a
FT   CDS             16..558
FT                   /*tag=  b
FT                   /product= "Immature mouse IGIF"
FT   sig_peptide     16..84
FT                   /*tag=  c
FT                   /note= "This sequence claimed by the inventors
FT                          under claim 11 in the specification"
FT   mat_peptide     85..555
FT                   /*tag=  d
FT   3'UTR           559..570
FT                   /*tag=  e
XX
PN   EP845530-A2.
XX
PD   03-JUN-1998.
XX
PF   28-NOV-1997;   97EP-0309632.
XX
PR   14-NOV-1997;   97JP-0329715.
PR   29-NOV-1996;   96JP-0333037.
PR   21-JAN-1997;   97JP-0020906.
XX
PA   (HAYB ) HAYASHIBARA SEIBUTSU KAGAKU.
XX
PI   Kurimoto M,  Okamoto I,  Yamamoto K;
XX
DR   WPI; 1998-288747/26.
DR   P-PSDB; W48960.
XX
PT   Mutants of interferon-gamma inducing polypeptide - useful as
PT   antitumour, antiviral, antimicrobial or anti-immunopathic agents
XX
PS   Claim 11; pages 38-39; 59pp; English.
XX
CC   The present sequence represents the wild-type mouse interferon-gamma
CC   inducing factor (mIGIF) cDNA.  The invention provides for mutant mouse
CC   and human interferon-gamma inducing factors in which one or more
CC   cysteine residues are replaced with different residues at or away from
CC   the consensus sequences shown in W48956-W48958.  The mutant mIGIFs are
CC   capable of stimulating immunocompetent cells for the production of
CC   interferon-gamma and are claimed to be less toxic, more active and
CC   stable than the corresponding wild type interferon-gamma inducing
CC   factor.  The mutant mIGIFs are also claimed to enhance killer cell
CC   cytotoxicity and/or induce killer cell formation, and may therefore
CC   be useful as antitumour agents, antitumour immunotherapeutics, antiviral
CC   agents and antimicrobial agents.  The mutant mIGIFs are also claimed
CC   to be useful for treating hepatitis, acquired immunodeficiency syndrome
CC   (AIDS), malaria, tuberculosis, solid malignant tumours (e.g. renal
CC   carcinoma), rheumatism, osteoporosis and thrombopenia caused by
CC   radiation-  and chemo-therapy.
XX
SQ   Sequence 570 BP; 175 A; 123 C; 121 G; 151 T; 0 other;


  Query Match           90.6%;  Score 15.4;  DB 19;  Length 570;
  Best Local Similarity   76.5%;  Pred. No. 68;
  Matches   13;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 TTYGARGARATGGAYCC 17
          ||:||:||:|||||:||
Db    328 tttgaggaaaatggatcc 344


RESULT  11
A16304
ID   A16304 standard; DNA; 649 BP.
XX
AC   A16304;
XX
DT   14-JUN-2000  (first entry)
XX
DE   Human colon cancer differentially expressed nucleotide sequence #309.
XX
KW   Colon cancer; detect; differential expression; human; treatment;
KW   detect mutation; non-invasive diagnostic method; ds.
XX
OS   Homo sapiens.
XX
PN   WO200012702-A2.
XX
PD   09-MAR-2000.
XX
PF   30-AUG-1999;   99WO-US19424.
XX
PR   31-AUG-1998;   98US-0098639.
PR   27-JAN-1999;   99US-0117393.
XX
PA   (FARB ) BAYER CORP.
XX
PI   Endege WO,  Steinmann KE,  Astle JH,  Burgess CC,  Carroll E;
PI   Catino TJ,  Dwivedi P,  Ford DM,  Lewis ME,  Molino GA,  Monahan JE;
PI   Schlegel R;
XX
DR   WPI; 2000-256641/22.
XX
PT   Novel nucleic acids and proteins for identifying therapeutic agents
PT   useful for treating and diagnosing cancer, especially colon cancer  -
XX
PS   Claim 16; Page 248; 345pp; English.
XX
CC   This sequence represents a human nucleotide sequence which is
CC   differentially expressed in colon cancer cells compared to the expression
CC   levels in normal cells. The nucleotide sequence can be used as a source
CC   of primers and probes. The nucleotide sequence is useful for determining
CC   the phenotype of a cell by detecting the differential expression of the
CC   sequence relative to a normal cell. The probes derived from the sequence
CC   can also be used to determine the phenotype of cells in a sample. Probes
CC   and antibodies which hybridise to the nucleotide sequence can also be
CC   used to determine the phenotype of a cell. The primers are useful for
CC   detecting a mutation in a test nucleotide sequence and also for detecting
CC   cancer, preferably colon cancer. Antibodies against the protein encoded
CC   by the nucleotide sequence can also be used in a method to detect colon
CC   cancer. The diagnostic method is non-invasive and accurate for diagnosing
CC   colon cancer at an early stage.
XX
SQ   Sequence 649 BP; 239 A; 117 C; 163 G; 124 T; 6 other;
```

```
  Query Match             84.7%;  Score 14.4;  DB 21;  Length 649;
  Best Local Similarity   75.0%;  Pred. No. 2.3e+02;
  Matches   12;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       2 TYGARGARATGGAYCC 17
           |:||:||:|||||:||
Db     396 ttgaggaaatggatcc 411


RESULT  12
T98608/c
ID   T98608 standard; DNA; 1550 BP.
XX
AC   T98608;
XX
DT   06-NOV-1998  (first entry)
XX
DE   DNA encoding two S. pneumoniae galactokinases.
XX
KW   Streptococcus pneumoniae protein; genetic immunisation; antagonist;
KW   immunological response; inoculation; antibody production; inhibitor;
KW   T cell immune response; antimicrobial compound; bacterial adhesion;
KW   extracellular matrix protein; protein-mediated cell invasion; wound;
KW   pathogenesis; ss.
XX
OS   Streptococcus pneumoniae.
XX
FH   Key             Location/Qualifiers
FT   CDS             complement (209..340)
FT                   /*tag=  a
FT   CDS             complement (1177..1359)
FT                   /*tag=  b
XX
PN   WO9743303-A1.
XX
PD   20-NOV-1997.
XX
PF   14-MAY-1997;   97WO-US07950.
XX
PR   14-MAY-1996;   96US-0017670.
XX
PA   (SMIK ) SMITHKLINE BEECHAM CORP.
PA   (SMIK ) SMITHKLINE BEECHAM PLC.
XX
PI   Black MT,  Hodgson JE,  Knowles DJC,  Nicholas RO;
PI   Stodola RK;
XX
DR   WPI; 1998-008793/01.
DR   P-PSDB; W38552, W38553.
XX
PT   Novel Streptococcus pneumoniae proteins and related DNA - useful for
PT   diagnosing anti-microbial agents for treatment of bacterial
PT   infections
XX
PS   Claim 4; Page 141; 483pp; English.
XX
CC   This sequence encodes two Streptococcus pneumoniae proteins that (based
CC   on homology with L. helveticus and B. subtilis proteins) are
CC   galactokinases, and represents a DNA sequence of the invention.
CC   The DNA sequences were isolated from Streptococcus pneumoniae strain
CC   0100993 (NCIMB 40794). The Streptococcus pneumoniae proteins of the
CC   invention can be used to identify compounds which interact with and
CC   inhibit or activate the activity of the proteins. Antagonists can be
CC   used to treat diseases caused by S. pneumoniae proteins, through genetic
CC   immunisation. They can also be used to induce an immunological response
CC   in a mammal by inoculation with the S. pneumoniae proteins or delivery
CC   of the encoding nucleic acids in a vector adequate to produce antibody
CC   and/or T cell immune responses to protect the animal from disease. The
CC   proteins can also be used to identify antimicrobial compounds which are
CC   capable of inhibiting their bioactivity. In particular the proteins of
CC   the invention can be used to prevent adhesion of bacteria to mammalian
CC   extracellular matrix proteins on in-dwelling devices or in wounds, to
CC   block protein-mediated mammalian cell invasion, and to block the normal
CC   progression of pathogenesis in infections initiated other than by the
CC   implantation of in-dwelling devices or other surgical techniques.
XX
SQ   Sequence 1550 BP; 460 A; 371 C; 290 G; 422 T; 7 other;


  Query Match             84.7%;  Score 14.4;  DB 19;  Length 1550;
  Best Local Similarity   75.0%;  Pred. No. 2.4e+02;
  Matches   12;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 TTYGARGARATGGAYC 16
           ||:||:||:|||||:|
Db     111 TTTGAGGAGATGGATC 96


RESULT  13
Z96238
ID   Z96238 standard; DNA; 1551 BP.
XX
AC   Z96238;
XX
DT   10-APR-2000  (first entry)
XX
DE   S. pneumoniae derived DNA from ORF #66.
XX
KW   Treatment; prevention; disease; diagnosis; gene therapy; screening;
KW   bacterial; antimicrobial; antibiotic; pathogenesis; infection; ss.
XX
OS   Streptococcus pneumoniae.
XX
PN   WO9806734-A1.
XX
PD   19-FEB-1998.
XX
PF   15-AUG-1997;   97WO-US14436.
XX
PR   16-AUG-1996;   96US-0024022.
XX
PA   (SMIK ) SMITHKLINE BEECHAM CORP.
XX
PI   Black MT,  Hodgson JE,  Knowles DJC,  Lonetto MA,  Nicholas RO;
PI   Stodola RK;
XX
DR   WPI; 1998-159452/14.
DR   P-PSDB; Y85863.
XX
PT   Streptococcus pneumoniae proteins and related DNA - useful for
PT   screening compounds for antibacterial activity
XX
PS   Claim 4; Page 98; 640pp; English.
XX
CC   This invention describes novel isolated Streptococcus pneumoniae
CC   polynucleotides (see Z96173-Z96494) and their encoded proteins (see
CC   Y85792-Y86182). The DNA, vectors and host cells described in the method
CC   of the invention are useful for the recombinant expression of the
CC   polypeptides. The polypeptides are useful for treatment or prevention of
CC   disease, or diagnosis of disease related to expression or activity of
CC   such a polypeptide. They can also be used to screen for compounds which
CC   interact with and inhibit or activate such a polypeptide. The
CC   polypeptides (or DNA encoding them, via gene therapy) are also useful
CC   for inducing an immunological response in a mammal. The antagonists are
CC   useful to inhibit such bacterial polypeptides. The polypeptides are
CC   particularly useful to identify antimicrobial compounds and antibiotics.
CC   They are also useful to determine their role in pathogenesis of
CC   infection, dysfunction and disease.
XX
SQ   Sequence 1551 BP; 428 A; 294 C; 365 G; 460 T; 4 other;


  Query Match             84.7%;  Score 14.4;  DB 19;  Length 1551;
  Best Local Similarity   75.0%;  Pred. No. 2.4e+02;
```

```
  Matches   12;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 TTYGARGARATGGAYC 16
          ||:||:||:|||||:|
Db   1441 tttgaggagatggatc 1456


RESULT  14
V52208
ID   V52208 standard; DNA; 8136 BP.
XX
AC   V52208;
XX
DT   23-OCT-1998  (first entry)
XX
DE   Streptococcus pneumoniae genome fragment SEQ ID NO:75.
XX
KW   Streptococcus pneumoniae; S. pneumoniae; genome; diagnosis; assay;
KW   computer readable medium; vaccine; pharmaceutical composition; ds.
XX
OS   Streptococcus pneumoniae.
XX
PN   WO9818931-A2.
XX
PD   07-MAY-1998.
XX
PF   30-OCT-1997;   97WO-US19588.
XX
PR   31-OCT-1996;   96US-0029960.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Barash SC,  Choi GH,  Dillon PJ,  Dougherty BA,  Fannon M;
PI   Kunsch CA,  Rosen CA;
XX
DR   WPI; 1998-272225/24.
XX
PT   Computer-readable medium with recorded Streptococcus pneumoniae
PT   polynucleotide sequences - useful in diagnostic kits and assays, and
PT   pharmaceutical compositions and vaccines for Streptococcus
PT   pneumoniae
XX
PS   Claim 1; Page 617-622; 1409pp; English.
XX
CC   The present invention describes a computer readable medium which has
CC   the nucleotide sequences SEQ ID NO:1 to 391 (V52134 to V52524) recorded
CC   on it, or a representative fragment or a sequence at least 95% identical
CC   to SEQ ID NO: 1 to 391. The nucleotide sequences depicted in SEQ ID NO:1
CC   to 391 (V52134 to V52524) are genomic fragments from Streptococcus
CC   pneumoniae. The present invention also describes an isolated nucleic acid
CC   molecule encoding a homologue of any of the fragments of the S.pneumoniae
CC   genome (SEQ ID NO:1 to 391) where the nucleic acid molecule is produced
CC   by a process comprising: (a) screening a genomic DNA library using as a
CC   probe a target sequence defined by any of the sequences in SEQ ID NO:1
CC   to 391, identifying members of the library which contain sequences
CC   that hybridise to the target sequence and isolating the nucleic acid
CC   molecules from the members; or (b) isolating mRNA, DNA or cDNA produced
CC   from an organism, amplifying nucleic acid molecules whose nucleotide
CC   sequence is homologous to amplification primers derived from the
CC   fragment of the S. pneumoniae genome to prime the amplification and
CC   isolating the amplified sequences. The computer readable medium can be
CC   used in a computer-based system for identifying fragments of the
CC   S. pneumoniae genome of commercial importance, or expression modulating
CC   fragments of the S. pneumoniae genome. Products from the present
CC   invention can be used in diagnosis kits and assays, and pharmaceutical
CC   compositions and vaccines for S. pneumoniae.
XX
SQ   Sequence 8136 BP; 2249 A; 1481 C; 1983 G; 2423 T; 0 other;


  Query Match             84.7%;  Score 14.4;  DB 19;  Length 8136;
  Best Local Similarity   75.0%;  Pred. No. 2.8e+02;
  Matches   12;  Conservative    4;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      1 TTYGARGARATGGAYC 16
          ||:||:||:|||||:|
Db   6692 tttgaggaaatggatc 6707


RESULT  15
X12945
ID   X12945 standard; DNA; 8377 BP.
XX
AC   X12945;
XX
DT   19-MAR-1999  (first entry)
XX
DE   Enterococcus faecalis genome contig SEQ ID NO:8.
XX
KW   Enterococcus faecalis; contig; detection; Enterococcal infection;
KW   vaccine; attenuation; computer readable medium; ds.
XX
OS   Enterococcus faecalis.
XX
PN   WO9850555-A2.
XX
PD   12-NOV-1998.
XX
PF   04-MAY-1998;   98WO-US08985.
XX
PR   14-NOV-1997;   97US-0066009.
PR   06-MAY-1997;   97US-0044031.
PR   16-MAY-1997;   97US-0046655.
XX
PA   (HUMA-) HUMAN GENOME SCI INC.
XX
PI   Barash SC,  Dillon PJ,  Kunsch CA;
XX
DR   WPI; 1999-045171/04.
XX
PT   New isolated Enterococcus faecalis polynucleotides and polypeptides
PT   - used to develop products for the detection of Enterococcus and for
PT   use in vaccines for prevention or attenuation of Enterococcus
PT   infection.
XX
PS   Claim 1; Page 297-301; 2084pp; English.
XX
CC   A computer readable medium has been developed which has recorded on it
CC   982 nucleotide sequences isolated from the Enterococcus faecalis genome.
CC   X12938 to X13919 represent these nucleotide sequences which are primary
CC   nucleotide sequences, also known as contigs. The computer-based system
CC   can identify fragments of the Enterococcus faecalis genome with
CC   commercial importance. The products can be used to detect the presence
CC   of Enterococcus faecalis in samples. They can also be used for
CC   diagnosing Enterococcal infection in an animal and monitoring
CC   progression of disease, and for identifying agents which can be used to
CC   modulate the growth or pathogenicity of Enterococcus faecalis, or
CC   another related organism, in vivo or in vitro. In particular the
CC   polypeptides encoded by the Enterococcus faecalis nucleotide sequences
CC   can be used in vaccines to prevent or attenuate an Enterococcal
CC   infection.
XX
SQ   Sequence 8377 BP; 2825 A; 1469 C; 1556 G; 2514 T; 13 other;


  Query Match             83.5%;  Score 14.2;  DB 20;  Length 8377;
  Best Local Similarity   76.5%;  Pred. No. 3.6e+02;
  Matches   13;  Conservative    3;  Mismatches    1;  Indels    0;  Gaps    0;

Qy      1 TTYGARGARATGGAYCC 17
          || ||:||:|||||:||
Db    450 ttggaagaaatggatcc 466


Search completed: May 14, 2001, 19:12:16
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Job time: 2716 sec